

### REMARKS

Claims 1 - 22, and 25 - 45 are now pending in the application. The Amendment does not introduce new matter, and the entry is respectfully requested. Based on the above Amendment and the following Remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections, and that they withdraw them.

#### Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1-4, 15 - 17, and 45 as allegedly being “clearly anticipated” by U.S. Patent No. 5,787,234 to Molloy. Applicants traverse this rejection based on the above amendment and the following Remarks, and respectfully request that the Examiner reconsider the rejection, and that they withdraw it.

Claim 1 has been amended to incorporate claim 10. In a rejection under 35 U.S.C. § 102, each and every claim element must be present in the applied reference. However, each and every claim element of Claim 1 are not present in Molloy. For example, Molloy does not disclose “reading data values from the work machine in response to a user request”, as recited in amended Claim 1. The Examiner has stated, relative to Claim 40, that “the work machine is shown in Molloy Fig. 2 where the problems are directly read from the products or the working machine”. However, Figure 2 of Molloy does not disclose reading data values from the work machine. Figure 2 illustrates the relationship of the information that may be used in the system disclosed in Molloy. For example, a product may be of a type of printer, a vendor of the product may be Epson, which may have an associated problem of poor print quality, and an associated diagnosis of worn ribbon (see Figure 6 of Molloy). That is, Figure 2 illustrates the inter-relationship of information, not reading data values from the machine. “Fig. 2 illustrates the interrelationships that are typically encountered among the various types of information found in a help desk environment.” [Col. 6 Line 51 – 53] “Fig. 2 depicts the relationships that might exist among the concepts found in an illustrative application of the invention”. [Col. 5 Line 17 – 19]. Figure 2 does not teach or suggest “reading data values from the work machine”. In fact, the Examiner has admitted on two occasions that “Molloy discloses many features of the claimed invention, but does not disclose reading data values from the work machine.” [Official Action of 6/11/2002, Page 5 2<sup>nd</sup> Full Paragraph], [Official Action of 11/19/2002, Page 5, 1<sup>st</sup> Full Paragraph]. Therefore, Molloy in general, and Fig. 2 and the associated description in particular, do not teach or

suggest “reading data values from the work machine in response to a user request”. This fact is reinforced by the Examiner’s admissions.

In the prior Official Action [Official Action of 6/11/02, page 5, 2<sup>nd</sup> Full Paragraph], the Examiner stated that “reading data values from a work machine” was unpatentable over Molloy in light of Nguyen. However, as successfully argued in the response: “Neither Molloy or Nguyen disclose reading values from the work machine in response to a user request. In fact, Nguyen mentions that additional data may be needed. The solution in Nguyen is for the user to physically obtain the data: “For example, the user may be requested to obtain further data, measure a particular parameter or test a particular component on the engine in order to confirm whether a particular action is appropriate”. (Col. 3, Line 59 – 62). Nguyen, in essence, teaches away from having the diagnostic advisor read data values from the work machine. Therefore, neither Nguyen or Molloy, combined or separate, teach or suggest the invention as described in Independent Claim 40.” [Response of 9/11/02, Page 6, Last Paragraph]. Therefore, since neither Nguyen or Molloy teach or suggest “reading data values from a work machine at the request of a user”, Claim 1 is allowable.

With respect to Claim 40, the Examiner has stated that “Molloy shows that the consultant obtains all the necessary information from the original equipment maker or vendor to make sure the problems to be diagnosed should have some known resolution.” [Official Action of 11/19/02, Page 9, 2<sup>nd</sup> Full Paragraph]. Even if this statement is accurate, it does not have a bearing on the patentability of Claim 1. For example, even if true, the ability to acquire information from the original equipment maker or vendor does not teach or suggest reading data values from a work machine. By way of example only, the current machine oil temperature is not a data value that may be obtained beforehand from the original equipment maker or vendor.

Therefore, Claim 1, as amended, and the associated dependent claims, are believed to be allowable.

Claims 17 and 45 have also been amended to incorporate the feature of “reading data values from the work machine in response to a user request”. As discussed above with respect to Fig. 2 of Molloy: “Fig. 2 illustrates the interrelationships that are typically encountered among the various types of information found in a help desk environment.” [Col. 6 Line 51 – 53] Therefore, Molloy does not teach or suggest “reading data values from the work machine”. In addition, as stated above, the Examiner admits “Molloy discloses many features of the claimed invention, but does not disclose reading data values from the work machine.” [Official Action of 6/11/2002, Page 5 2<sup>nd</sup> Full Paragraph], [Official Action of

11/19/2002, Page 5, 1<sup>st</sup> Full Paragraph]. Therefore, Molloy in general, and Fig. 2 and the associated description in particular, do not teach or suggest “reading data values from the work machine in response to a user request”.

In addition, as described above, Nguyen does not teach or suggest “reading data values from the work machine in response to a user request. In fact, Nguyen mentions that additional data may be needed. The solution in Nguyen is for the user to physically obtain the data: “For example, the user may be requested to obtain further data, measure a particular parameter or test a particular component on the engine in order to confirm whether a particular action is appropriate”. (Col. 3, Line 59 – 62). Nguyen, in essence, teaches away from having the diagnostic advisor read data values from the work machine. Therefore, neither Nguyen or Molloy, combined or separate, teach or suggest the invention as described in Independent Claim 17 or 45.

Therefore, Claim 17 and 45, as amended, and the associated dependent claims, are believed to be allowable.

#### Rejections under 35 U.S.C. § 103

The Examiner has rejected claims 21 – 31, 40, 41 and 44 under the obviousness provisions of 35 U.S.C. § 103 as allegedly being unpatentable over U.S. Patent No. 5,787,234 to Molloy in view of U.S. Patent No. 6,125,312 to Nguyen et al.. Claims 21, 22, and 44 have been amended. The rejection as applied to the remaining claims is respectfully traversed.

With respect to Claim 40, neither Molloy or Nguyen teach or suggest “reading data values from the work machine in response to a user request”. The Examiner has stated that “the work machine is shown in Molloy Fig 2 where the problems are directly read from the products or the working machines.” [Official Action of 11/19/2002, Page 9, 2<sup>nd</sup> Full Paragraph]. However, Figure 2 of Molloy does not disclose reading data values from the work machine. Figure 2 illustrates the relationship of the information that may be used in the system disclosed in Molloy. For example, a product may be of a type of printer, a vendor of the product may be Epson, which may have an associated problem of poor print quality, and an associated diagnosis of worn ribbon (see Fig. 6 of Molloy). That is, Fig. 2 illustrates the inter-relationship of information. “Fig. 2 illustrates the interrelationships that are typically encountered among the various types of information found in a help desk environment.” [Col. 6 Line 51 – 53] “Fig. 2 depicts the relationships that might exist among the concepts found in an illustrative application of the invention”. [Col. 5 Line 17 – 19]. Fig. 2 does not teach or

suggest “reading data values from the work machine”. In fact, the Examiner has pointed out on two occasions that “Molloy discloses many features of the claimed invention, but does not disclose reading data values from the work machine.” [Official Action of 6/11/2002, Page 5 2<sup>nd</sup> Full Paragraph], [Official Action of 11/19/2002, Page 5, 1<sup>st</sup> Full Paragraph]. It appears that, despite the Examiner’s prior admissions, and the teachings of Molloy, the Examiner is attempting to read something into Molloy that simply isn’t there. The applicant’s application may not be used as a blueprint to reconstruct the claimed invention out of isolated teachings in the prior art, especially where the claim limitations recited in Claim 40 are not found in either Molloy or Nguyen.

Therefore, Molloy in general, and Fig. 2 and the associated description in particular, do not teach or suggest “reading data values from the work machine in response to a user request”. This fact is reinforced by the Examiner’s admissions.

With respect to Claim 40, the Examiner has also stated that “Molloy shows that the consultant obtains all the necessary information from the original equipment maker or vendor to make sure the problems to be diagnosed should have some known resolution.” [Official Action of 11/19/02, Page 9, 2<sup>nd</sup> Full Paragraph]. Even if this statement is accurate, it does not have a bearing on the patentability of Claim 1. For example, even if true, the ability to acquire information from the original equipment maker or vendor does not teach or suggest reading data values from a work machine. By way of example only, the current machine oil temperature is not a data value that may be obtained beforehand from the original equipment maker or vendor. Therefore, neither Nguyen or Molloy, either separately or combined, teach or suggest Claim 40.


Independent claims 21, 22, and 44 have been amended to incorporate reading “data values from the work machine in response to a user request”. The Examiner has admitted that “Molloy discloses many features of the claimed invention, but does not disclose reading data values from the work machine.” [Official Action of 6/11/2002, Page 5 2<sup>nd</sup> Full Paragraph], [Official Action of 11/19/2002, Page 5, 1<sup>st</sup> Full Paragraph]. Therefore, with regard to independent Claims 21, 22, and 44, for the reasons stated above, including the Examiner’s own admissions regarding Molloy, neither Molloy or Nguyen, alone or combined, teach or suggest reading “data values from the work machine in response to a user request.” Therefore, Independent Claims 21, 22, and 44 are not obvious in light of Molloy and Nguyen either alone or combined.

For the reasons given above, Applicant respectfully submits that the claims, 21, 22, 40 and 44, and the associated dependent claims, patentably distinguish Applicant's invention over the references cited by the Examiner, and are in condition for allowance.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections, and that they withdraw them. The Examiner is courteously invited to telephone the undersigned representative if they believes that an interview might be useful for any reason. In the event that the Examiner is unpersuaded by Applicant's arguments, it is respectfully requested that the Examiner enter the Amendment for purposes of Appeal.

Respectfully submitted,

  
W. Bryan McPherson  
Patent Attorney  
Attorney Reg. No. 41,988  
Caterpillar Inc.

Telephone (309) 675-4015  
WBM:hsf  
g:\wbm\OF00-104us.doc



**Marked Up Copy of Amendments pursuant to 37 CFR 1.121**

Title: METHOD AND SYSTEM FOR PROVIDING  
DIAGNOSTICS FOR A WORK MACHINE

Application No. : 09/742,879

Atty Docket No. : 00-104

In the Claims

1. A computer based method for providing case base diagnostics for a work machine, the case bases being comprised of diagnostic information and processes related to the work machine, including the steps of:

receiving from an user, a description of an initial problem related to the work machine;

displaying at least one question, as a function of the initial problem;

displaying a first set of recommended actions, as a function of the initial problem;

reading data values from the work machine in response to a user request;

receiving an answer from the user to the at least one question; and,

displaying a second set of recommended actions as a function of the initial problem and the answer to the at least one question, wherein the second set of recommended actions is one of a subset of the first set of recommended actions, a set of other recommended actions, and a combination of recommended actions from the first set and an other set.

17. A computer based method for providing case base diagnostics for a work machine, the case bases being comprised of diagnostic information and processes related to the work machine, including the steps of:

receiving from an user, a description of an initial problem related to the work machine;

displaying at least one question, as a function of the initial problem;  
displaying a first set of recommended actions, as a function of the initial problem;  
receiving an answer from the user to the at least one question;  
reading data values from the work machine in response to a user request;  
displaying a second set of recommended actions as a function of the initial problem, the read data values, and the answer to the at least one question, wherein the second set of recommended actions is one of a subset of the first set of recommended actions, a set of other recommended actions, and a combination of recommended actions from the first set and an other set; and,  
providing a graphical user interface for operation by the user.

21. A computer based method, for providing case base diagnostics for a work machine, the case bases being comprised of diagnostic information and processes related to the work machine, including the steps of:

receiving from an user, a description of an initial problem related to the work machine;  
displaying at least one question, as a function of the initial problem;  
displaying a first set of recommended actions, as a function of the initial problem;  
reading data values from the work machine in response to a user request;  
receiving an answer from the user to the at least one question;  
displaying the answer provided by the user;  
displaying a second set of recommended actions as a function of the initial problem and the answer to the at least one question, wherein the second set of recommended actions is one of a subset of the first set of recommended actions, a set of other recommended actions, and a combination of recommended actions from the first set and an other set;  
displaying a confidence level associated with each recommended action in the first and second sets of recommended actions; and,  
providing a link to information related to the work machine in an external

source.

22. A computer based system for providing case base diagnostics for a work machine, the case bases being comprised of diagnostic information and processes related to the work machine, comprising:

an external source containing service information related to the work machine;  
a diagnostic advisor tool for interaction with a user, receiving information from the user and responsively displaying at least one recommended action, and providing a link to relevant information within the external source; and

wherein the diagnostic advisor tool is adapted to receive, from the user, a description of an initial problem related to the work machine, display at least one question, as a function of the initial problem, display a first set of recommended actions, as a function of the initial problem, read data values from the work machine in response to a user request; receive an answer from the user to the at least one question and display a second set of recommended actions as a function of the initial problem and the answer to the at least one question, wherein the second set of recommended actions is one of a subset of the first set of recommended actions, a set of other recommended actions, and a combination of recommended actions from the first set and an other set.

44. A computer based system for providing case base diagnostics for a work machine, the case bases being comprised of diagnostic information and processes related to the work machine, comprising:

an external source containing service information related to the work machine;  
and,

a diagnostic advisor tool for interaction with a user, receiving information from the user and responsively displaying at least one recommended action, and providing a link to relevant information within the external source;

wherein the diagnostic advisor tool is adapted to receive, from the user, a description of an initial problem related to the work machine, display at least one question, as a function of the initial problem, and display a first set of recommended actions, as a function



of the initial problem; to read data values from the work machine in response to a user request, to receive an answer from the user to the at least one question and display a second set of recommended actions as a function of the initial problem and the answer to the at least one question, wherein the second set of recommended actions is one of a subset of the first set of recommended actions, a set of other recommended actions, and a combination of recommended actions from the first set and an other set; to display a confidence level associated with each recommended action in the first and second sets of recommended actions; and to provide a link to information related to the work machine in an external source.

45. A computer program product for providing case base diagnostics for a work machine, the case bases being comprised of diagnostic information and processes related to the work machine, the computer program product comprising a computer usable storage medium having computer readable program code means embodied in the medium, the computer readable program code comprising:

computer readable program code means for receiving from an user, a description of an initial problem related to the work machine;

computer readable program code means for displaying at least one question, as a function of the initial problem;

computer readable program code means for displaying a first set of recommended actions, as a function of the initial problem;

computer readable program code means for reading data values from the work machine in response to a user request

computer readable program code means for receiving an answer from the user to the at least one question; and,

computer readable program code means for displaying a second set of recommended actions as a function of the initial problem and the answer to the at least one question, wherein the second set of recommended actions is one of a subset of the first set of recommended actions, a set of other recommended actions, and a combination of recommended actions from the first set and an other set.